

## Water Conservation 2020: Strategic Recommendations

Citizens Water Conservation  
Implementation Task Force  
Report to City Council

Water Conservation 2020:  
Strategic Recommendations

March 2010



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### Citizens Water Conservation Implementation Task Force

City Council  
April 29, 2010

## Citizens Task Force



### Irrigators

Spencer Carlton  
(Landscapes USA)

### Commercial

Jody McDaniel  
(Greater TX Landscapes)

### Industrial

Dan Wilcox  
(Spansion)

### Developers

Robert Ledbetter  
(BOMA Austin)

### Multifamily

Gayle Rosenthal  
(Rosenthal Properties)

### At Large

Susan Butler (CH2MHill), Chair  
Margot Clarke (neighborhood assns)  
Richard Hatfield (rain harvesting)  
Norman Johns (NWF)  
Nora Mullarkey (LCRA)  
Susan Roth (consultant)

### Environment

Jennifer Walker  
(Sierra Club)  
Vice-Chair

### Government

Rusty Osborne  
(University of Texas)

### Restaurants

Vacant

### Hotels

Vacant

Environmental Board – Robin Gary, Mary Ann Neely

Resource Management Commission – Amy Hardberger, Grace Hsieh

Water and Wastewater Commission – Aaron Googins, Sarah Faust

## City of Austin Water Utility Collaborating Staff



We gratefully acknowledge the hard work and efforts of the Austin Water Utility staff who supported this work.

In particular we thank Daryl Slusher, Drema Gross, Robert Stefani, Dan Pederson, and Abigail Webster.

## Task Force Charge



### **Resolution No. 20071206-007**

- Creates Citizens Water Conservation Implementation Task Force (CWCITF)

### **Resolution No. 20090806-036 (Aug 6, 2009)**

- Tasks CWCITF to develop a policy document that recommends water conservation measures
  - Work with Environmental Board, Resource Management Commission and Water and Wastewater Commission
  - Progress report due by November 5, 2009
  - Final policy document due by January 1, 2010 (extension granted)

### **Resolution No. 20091119-066**

- Presentations of draft policy document to public, Board, and Commissions
- Extends deadline for Citizens Task Force presentation of report to City Council to April 1, 2010

# Vision



*The City of Austin, in partnership with its stakeholders, will be the leader in sustainable water management by implementing model water conservation measures*

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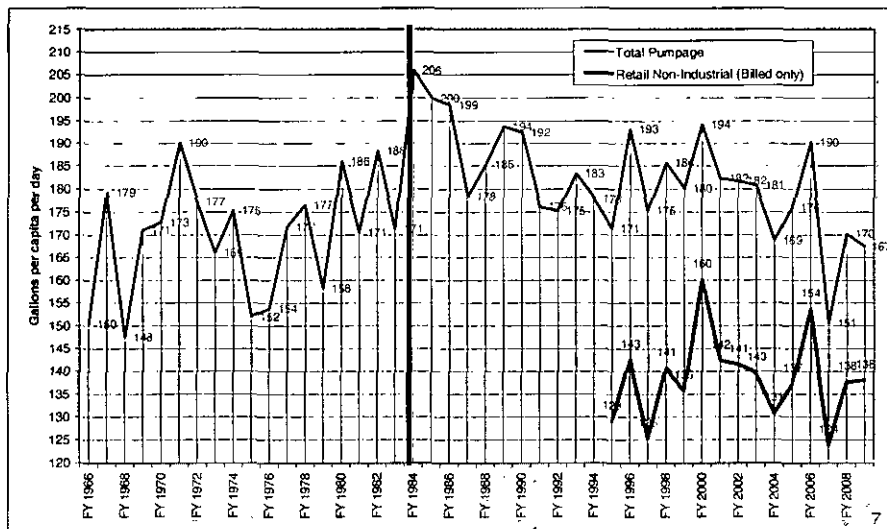
# Guiding Principles



1. Education and outreach programs are key
2. Programs accessible to all users
3. Partnerships fundamental to success
4. A priority consideration for all city departments
5. Includes permanent structural changes and strategies to change behavior balancing incentives, policies and regulation
6. Dynamic process that requires flexibility regarding specific measures
7. Cost-effective strategies pursued, but other criteria are important

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## Conservation Success 1984-2009



## Recommended Goals



### Existing goal:

*Reduce peak water use by 1 percent per year;  
reduce 25 mgd from peak by 2017*

### Additional Task Force recommended goals:

1. Reduce total per capita water production to 140 gpcd or less by 2020 (periodically revisit as conditions change)
2. Austin customers will understand their water use and actively find ways to use it more efficiently

# Strategies Identified



## Categories:

1. **Outdoor** conservation (existing and new construction)
2. **Industrial, Commercial & Institutional** conservation
3. **Indoor Residential** conservation
4. **Infrastructure & Facilities Management**
5. **Reclaimed water**
6. **Public Information, Education & Outreach**
7. Overcoming regulatory **Impediments** to conservation
8. **Funding and Financial Considerations**

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# Prioritized Strategies



- **Brainstorm and Evaluation**
  - Over one hundred potential strategies
  - Complete list provided in Appendix One
- **Prioritization by Category**
  - 25 “quantifiable” strategies
  - 8 “non-quantifiable” strategies

## Evaluation Criteria included:

- Cost-effectiveness
- Technology/ market maturity
- Certainty of water savings
- Potential magnitude of water savings
- Service area match
- End-user and public acceptability
- Customers' ability to implement

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## “Quantifiable” Strategies

Outdoor Existing Construction (O-EC)	
1	Extend the “no more than twice a week” watering schedule year round (i.e. the schedule would not be a drought response restriction)
2	Improve follow-up to irrigation audits, including equipment/system and landscape retrofits
3	Simplify and restructure existing rebate programs including: 1) rain harvesting/irrigation rebates; 2) combine various equipment rebates for commercial customers; 3) restructure the irrigation rebates
4	Include pool inspections as part of irrigation audits
5	Improve enforcement of water waste violations
6	Encourage use of reclaimed water for irrigation on residential lots and commercial properties where reclaimed water is reasonably accessible
Outdoor New Construction (O-NC)	
1	Amend plumbing code to allow beneficial use of air conditioning condensate for residential and commercial properties
2	Utility service extension requests should trigger assessment of opportunities for on-site water reuse and other methods to reduce water demand
3	Develop water efficiency criteria and certification for new construction as either a part of or a stand-alone program
4	Site plans should include on-site water management strategies, and sufficient training should be provided for plan reviewers and inspectors
5	Require limitations on irrigated areas for new residential construction
Industrial/Commercial/Institutional (ICI)	
1	Provide and strategically market comprehensive retrofit packages to institutions such as schools, universities, and other institutions with residential populations. Reclaimed water use should be encouraged where feasible
2	Provide and strategically implement incentive packages for high-water using commercial activities such as hotels and restaurants
3	Review plumbing and building codes and amend if necessary to ensure conservation requirements for ICI customers specify up-to-date, water-efficient technology

Indoor Residential (IR)	
1	Continue existing incentive programs for residential water users; adjust rebate amounts or processes if necessary to increase effectiveness
2	Provide indoor home water audits in conjunction with outdoor water audits. Continue to partner with Austin Energy to conduct water and energy audits as a package. Develop on-line calculators so residents can self-perform audits
3	Require (to the extent allowed by law) that those multi-family homes with submeters actually bill their residents based on metered water use
Infrastructure & Facilities Management (IFM)	
1	In future contracts, or contract amendments, include enforceable provisions that require wholesale customers to enact conservation programs that are at least as robust as the City of’s program. Require annual system audits and aggressive leak detection programs. In the interim, consider providing incentives to retail customers within wholesale customer service area. (This expands the 2007 Recommendation)
2	Keep repairing leaks and replacing aging infrastructure as a priority in the Capital Improvement Plan
3	The Parks and Recreation Department should implement strong conservation practices for all its water use, including raw water use. Replacement of or upgrades to irrigation systems, adherence to city city-wide watering schedules, and repair of pool leaks should be a priority
4	Implement a multi-year smart meter change-out program to provide “real time” water use data. Begin with a pilot program to provide data for benefit cost evaluation
5	Retrofit all city facilities with efficient plumbing fixtures and appliances, install drought-tolerant landscapes and efficient irrigation systems. Consider adopting internal goal of reducing city use by 2% per year through 2020. Use city facilities as demonstration sites. COA should post conservation-minded signage in its facilities. (This expands the 2007 recommendation)
Reclaimed Water (RU)	
1	Require reuse and reclaimed water users to follow efficiency and conservation standards to avoid waste of this resource. The Water Conservation Ordinance should include benefits for non-potable water users during drought
2	Incorporate reclaimed water service into service delivery plans and projects that extend potable water and wastewater systems for new developments such as along SH 130
3	Actively solicit existing utility customers that could use reclaimed water for non-potable uses

## “Non-Quantifiable” Strategies



Public Information/Education & Outreach (POE)	
1	Implement a strategic marketing program to address all water users. Key elements should include focus groups, strong visual brands, workshops for specific end-users, a pro-active speaker’s bureau, a variety of media to reach different users, and simple messages that are a call to action
2	Support measurable water conservation programs with strong customer information and education. Enable customers to easily access historical and current data about their water use on their bills and online
Impediments to Conservation (IMP)	
1	Engage a third party to review city code and procedures to ensure that water conserving best practices are incorporated into development codes and criteria manuals, watershed protection regulations, building codes, construction practices, and facilities operations
Funding & Financial Considerations (F)	
1	Continue to investigate other water rate structures that foster change in water use habits through pricing incentives (e.g., “base-excess use” billing; seasonal surcharges; budget-based billing; or higher rates for outdoor use measured with irrigation-only meters.)
2	Design future rate structures to ensure that both conservation and affordability considerations are incorporated
5	Set aside an established percentage of highest residential rate tier revenues for water conservation programs, and consider assessing a modest monthly fee based on meter-size for non-residential customers to fund conservation programs
6	Rather than assessing impact fees to recover cost of off-site system capacity for “irrigation only” meters, develop capital recovery fees to recover costs of meter purchase and installation for a separate irrigation meter when expected use at the site does not increase
12	Develop a metric for the cost of water supplies deferred by conservation (i.e., in mgd or acre-feet per year) and use this “price point” to evaluate cost-effectiveness of conservation programs

## Key Findings and Conclusions



- Education, education, education
  - Water supply awareness and conservation literacy critical to success
- Conservation Works
  - Conservation is a long-term investment that requires long-term funding certainty
  - Programs should provide incentives for all water users
- Value of Water
  - Water rates should reflect the real cost of water but ensure affordability for basic needs
  - Conservation measures should make good business sense

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## Recommendations: Next Steps



1. Complete cost/benefit analysis for all strategies
2. Include identified 'low hanging fruit' in 2010-2011 budget request
3. Develop a 10-year action plan (business plan)
  - Mix of measures
  - Flexible to change with market and technology
  - Estimate water savings and annual cost

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# Board, Commissions and Public Review



Environmental Board: Recommended adoption of plan as first step and development of action plan

Public Event at St. David's Church: Comments and ideas included in plan

Water and Wastewater Commission:  
Recommended adoption of plan, water use goal and staff development of action plan

Resource Management Commission:  
Recommended adoption of plan, water use goal and staff development of action plan, among other recommendations

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Citizens Water Conservation Implementation Task Force Members


Designated Participants (Invited and Co-Participants)


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<http://www.ci.austin.tx.us/watercon/citizenstaskforce.htm>



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